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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/844,533 | 04/27/2001 | Tatsumi Takahashi | 01254C/HG | 3735 |

1933 7590 04/24/2003

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[REDACTED] EXAMINER

MARCANTONI, PAUL D

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

1755

DATE MAILED: 04/24/2003

Ld

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/844,533 | TAKAHASHI ET AL. |
| | Examiner Paul Marcantoni | Art Unit 1755 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

4/17/03 RCE filing

1) Responsive to communication(s) filed on 09 October 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 18, 19 and 21-56 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 18, 19, and 21-56 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 27 April 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s) _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other:

Prior Art Rejection:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 19, and 21-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knopf et al. '174B2 or '736B1 alone or in view of Jones et al. '792, Warren et al. '660, Mostkoff '265, Barnes '792 B1, Article "Miroz System for Construction of Artificial Reefs Using Coral Fragments", or Hardie ("Private Artificial Reef may be in your future").

Knopf et al. teach it is old in the art to rapidly carbonate large cement structures including slag (see claims) and thus this carbonation technique would have been obvious to one of ordinary skill in the art. Knopf et al. do not teach for use underwater yet he also do not teach that it cannot be used underwater and it would appear that it is already known that other cement structures are known for use underwater and the use of a different cement structure's usage underwater would have been an obvious design choice for one of ordinary skill in the art.

Knopf et al. further teach teach that carbonated cementitious materials can also be used for building artificial reefs. (with emphasis, colum 4 lines 25-30). This would appear to indicate that cementitious structures (ie inclusive of shapes such as blocks) can be used underwater. The applicants' method of repairing a river bed in claim 56 would appear to be the same thing as forming an artificial reef within the teaching of

Knopf et al. The applicants are not repairing a river bed to put a bridge or tunnel or other construction work above or under it but placing these blocks in a body of water to form an underwater ecosystem for plants and animals. In other words, an artificial reef.

All of the secondary references above teach that the use of a cement blocks for artificial reefs would have been old and an obvious design choice to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is (703)-308-1196. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (703) 308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9310 for regular communications and (703)-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Paul Marcantoni
Primary Examiner
Art Unit 1755